

Versatile, feature-rich multi-service routers, designed to support highly secure, flexible, and reliable Open Services Networking solutions

OVERVIEW

The network is a critical component of a successful business, helping organizations expand into new markets, collaborate with customers, partners and employees and efficiently manage communications. It is imperative that the network enable these processes and communications reliably and cost effectively, while providing protection from potentially disruptive, expensive and reputation damaging security breaches.

With a modular design and support for innovative 3Com® Open Services Networking (OSN), 3Com MSR Series Multi-Service Routers deliver unmatched flexibility in satisfying customer business requirements, while reducing complexity, simplifying management and increasing control, providing lasting investment protection, and reducing capital and operating expenses.

The MSR 30 Series consists of four modular chassis, available in Power over Ethernet (PoE) and non-PoE models—the MSR 30-16, 30-20, 30-40 and 30-60—delivering:

- › OSN-enabled solutions, providing business productivity, enhanced security and performance accelerating applications and services;
- › unparalleled secure, converged networking through the use of embedded and integrated hardware-based encryption and voice processing capabilities;
- › reliable, scalable, high-performance WAN and LAN connectivity in a single platform; and,
- › a comprehensive portfolio of interface and module options for LAN, WAN and voice communications.

3Com Multi-Service Routers enable an agile and flexible network infrastructure, with the ability to quickly adapt to changing business requirements, while delivering integrated, concurrent services on a single, easy-to-manage platform.



from left, top: 3Com MSR 30-20, MSR 30-60, MSR 30-16, MSR 30-40

KEY BENEFITS

UNMATCHED FLEXIBILITY AND INVESTMENT PROTECTION WITH OPEN SERVICES NETWORKING

The MSR 30 enhances network functionality through 3Com Open Services Networking (OSN), delivering unmatched application and service flexibility based on business requirements. The result is increased investment protection, reduced complexity and costs, simplified deployment and management, and increased visibility and control.

The modular design and high-performance engine of the MSR 30 Series, coupled with the flexibility of OSN, enables users to integrate individual or multiple business productivity, enhanced security and/or performance accelerating applications into the network. Additionally, users can deploy applications to meet their objectives today and easily update or change applications and services as the business evolves.

OSN applications are integrated into the MSR platform through Open Services Modules (OSM) that feature standalone processing capabilities, a secure Linux operating system, and embedded memory to maximize performance and flexibility without compromising the MSR's processor unit.

For service providers and systems integrators, the MSR platform and OSN enable innovative, differentiated services that provide higher value to customers and increase retention. For example, service providers can create and rapidly deploy fully-managed bundled voice, video and data services as well as customize their offering to fulfill a customer's unique business needs. Additionally, through 3Com's corporate developer program, service providers can leverage OSN to deploy their in-house-produced applications on the MSR, protecting their development investments.

Examples of best-of-breed commercial, open source and 3Com applications enabled through OSN include:

- › Voice over IP and live and on-demand video that empower employees and increase productivity;
- › enhanced security functionality, including Information Leak Protection (ILP) and Security Information Event Management (SIEM) to fortify an organization's multi-layered security strategy;
- › network performance-enhancing WAN optimization and application acceleration that give branch office and remote employees faster and more reliable access to the tools and information needed to be successful; and,
- › monitoring and management applications to simplify network deployment and management as well as provide deep visibility in order to make informed business decisions.

Read more at www.3com.com/OSN.

CONVERGED COMMUNICATIONS SUPPORT

In addition to a comprehensive portfolio of voice gateway interfaces, the MSR 30 Series delivers services up to wirespeed T1/E1 rates. The MSR 30 also offers optional embedded Voice Processing Modules (VPM) and Voice Co-Processing Modules (VCPM), which enable advanced voice processing for high-performance analog and digital voice services without compromising performance of the other modules or of the router.

The VCPM provides local Time Division Multiplexing (TDM) functions while the VPM serves as a Digital Signal Processor (DSP) to support IP voice communication over the network. Scalable voice configurations and higher line density are supported through the use of multiple VPMs, based on the number of voice lines required. VPMs and VCPMs reside on a centralized, embedded multi-service processor module, conserving router I/O slots for maximum port density and configuration flexibility. Fully-populated, the MSR 30 Series can accommodate as many as 300 digital voice channels.

Building on 3Com's commitment to open standards, the MSR 30 Series supports common industry voice protocols including Session Initiation Protocol (SIP) and H.323.

KEY BENEFITS

(CONTINUED)

ADVANCED SECURITY AND CONTROL

To help protect sensitive information against unauthorized access, the MSR 30 Series integrates a number of comprehensive security services and access management capabilities, including:

- › Hardware-based Standard Network Data Encryption (SNDE) and Advanced Network Data Encryption (ANDE) embedded via Enhanced Services Modules (ESM) slots;
- › Encryption acceleration capabilities that ensure security without compromising network throughput as performance needs increase;
- › Progressive encryption methods such as DES and 3DES;
- › A comprehensive portfolio of security functionality delivered on the OSN module, including Information Leak Protection (ILP) and Security Information and Event Management (SIEM); and,
- › Additional security features such as advanced firewall, L2TP, MPLS and IPsec VPNs. SSHv2 and SNMPv3 protect router management sessions.

As with the voice modules, ESM modules reside on a centralized multi-service processing module, conserving router I/O slots for maximum configuration flexibility, port density and routing performance.

INTEGRATED AND FLEXIBLE SERVICES ARCHITECTURE

The MSR 30 Series is modular in design and delivers integrated, concurrent services on a single platform, creating operational efficiencies, reducing costs and maximizing precious rack space and power.

With a comprehensive set of integrated modules that deliver voice and data interfaces, routing and switching capabilities as well as additional advanced OSN-enabled applications, the MSR 30 has the capacity to deliver the functionality of multiple devices and appliances in a single platform.

The OSN applications are directly integrated into the router fabric to deliver deep monitoring capabilities and application functionality, with management via a single interface.

HIGH DENSITY ROUTING AND SWITCHING PERFORMANCE

When evaluating multi-service routers, performance, port density and configuration flexibility are all key considerations. The MSR 30 Series outperforms competing multi-service routers, delivering packet forwarding performance up to 240 Kpps and encryption performance of up to 250 Mbps.

With a comprehensive portfolio of WAN and LAN interface modules, the MSR 30 delivers concurrent services up to T1/E1 rates, in addition to Fast Ethernet and Gigabit Ethernet LAN connectivity, and offers in-line PoE to provision IP phones, WLAN access points and IP security cameras as part of a unified branch office solution. In addition, Multi-function Interface Module (MIM) and Smart Interface Card (SIC) options include high-density Layer 2 10/100 Mbps Ethernet switching cards for integrated switching and routing in a single platform, simplifying infrastructure deployments for branch and regional offices.

RESILIENCE AND REDUNDANCY FOR MAXIMUM UPTIME

The MSR 30 Series is designed for the highest levels of availability and resiliency to ensure continuous operation and to meet the requirements of real-time applications such as VoIP and live and on-demand video. Additional reliability capabilities include configuration rollback, Multilink PPP and Multilink Frame Relay and VRRP.

NEXT-GENERATION ROUTING CAPABILITIES

The evolution to next generation networks based on IPv6 is imminent; however, organizations worldwide will follow different paths as they transition from today's IPv4 networks. The MSR 30 Series offers comprehensive IPv4 and IPv6 routing capabilities to accommodate a variety of migration approaches such as IPv4 "islands" on IPv6 networks, IPv6 "islands" on IPv4 networks and interconnection (with protocol translation) of IPv6 and IPv4 networks, enabling a wide array of network design possibilities.

Through a powerful suite of MPLS features, including MPLS TE (Traffic Engineering) and Fast Re-Route (FRR), the MSR 30 Series maximizes the benefit of a MPLS backbone to provide bandwidth optimization, strict QoS guarantees for the transport of critical traffic and the ability to quickly re-route traffic following network failures.

KEY BENEFITS

(CONTINUED)

FULLY FEATURED ROUTING PLATFORM

Unlike competitive offerings, the MSR 30 Series comes equipped with a complete routing and security suite, a robust application set and all required operating memory, eliminating the need for costly and inconvenient upgrades. Specifically, the MSR 30 Series includes:

- › Open, industry standards-based routing capabilities such as: IP and IPX routing; Open Shortest Path First (OSPF), RIP versions 1, 2 and 3; integrated intermediate system to intermediate system (IS-IS); multicast routing; QoS; IEEE 802.1Q VLANs; and IGMP versions 1, 2 and 3;
- › Built-in CompactFlash and USB slots that hold multiple configuration files and operating systems for recovery purposes; and,
- › A full complement of memory, including up to 1 Gb of SDRAM and 256 Mb of CompactFlash memory to support dual software images.

SOPHISTICATED MANAGEMENT

Network infrastructure deployments and upgrades can be costly and time-consuming for organizations with several branch offices or remote locations. The MSR 30 Series offers an intuitive, easy-to-use CLI function that can be securely accessed locally or remotely for comprehensive configuration and management, with additional features that provide an extensive set of management capabilities.

For example, the MSR 30 Series is compatible with industry-standard NetFlow, an efficient and powerful technique for collecting IP traffic information, including information about network users and applications, peak usage times and traffic volumes. The MSR 30 Series is also fully manageable via the 3Com Enterprise Management Suite (EMS), a powerful graphical application with advanced remote diagnostics and network management capabilities. With capabilities such as QoS, systems infrastructure and voice applications, EMS ensures rapid deployments of IP telephony systems and robust support of both the data and voice components of a converged network.

FEATURE HIGHLIGHTS

- › OSN-ready platform delivers unmatched flexibility, providing reduced complexity, simplified management and increased control, lasting investment protection, and reduction in capital and operating expenses.
- › Integrated routing and switching, and remote management capabilities simplify managed services for remote locations and branch offices.
- › Advanced Multi-Service Architecture delivers enhanced, integrated data, voice and security services.
- › Embedded voice processing functionality delivers advanced, high-performance analog and digital voice capabilities for connections to centralized IP PBX and local public switched telephone network (PSTN).
- › Versatile modular chassis supports a full portfolio of WAN, LAN and voice interfaces. Backward compatibility with existing SIC and MIM interfaces enhances investment protection and provides maximum configuration flexibility.
- › Advanced, embedded security functions with multiple hardware encryption options ensure the highest levels of security without sacrificing throughput performance.
- › Standards-based design ensures complete interoperability in multi-vendor environments, including Cisco.
- › Enhanced performance, security and reliability make the MSR 30 Series the perfect platform for delivering converged networks, including data, voice, video, and additional advanced applications through OSN.
- › Comprehensive IPv6 and IPv4 routing functionality ensures seamless migration.
- › Engineered by H3C, a 3Com company.

SPECIFICATIONS

All information in this section is relevant to the MSR 30-16, 30-20, 30-40 and 30-60 unless stated otherwise.

MIM = Multi-function Interface Module

DMIM = Double-width Multi-function Interface Module

SIC = Smart Interface Controller

DSIC = Double-width Smart Interface Controller

SLOT AND PORT CAPACITY

MSR 30-16

MIM slots: 1 single-width MIM

SIC slots:

- › 4 single-width or
- › 2 single-width and 1 double-width or
- › 2 double-width

MSR 30-20

MIM slots: 2 single-width

SIC slots:

- › 4 single-width or
- › 2 single-width and 1 double-width or
- › 2 double-width

MSR 30-40

MIM slots:

- › 4 single-width or
- › 2 single-width and 1 double-width

SIC slots:

- › 4 single-width or
- › 2 single-width and 1 double-width or
- › 2 double-width

MSR 30-60

MIM slots:

- › 6 single-width or
- › 2 single-width and 2 double-width or
- › 4 single-width and 1 double-width

SIC slots:

- › 4 single-width or
- › 2 single-width and 1 double-width or
- › 2 double-width

All models

3 Voice Processor Module slots, for optional 8-, 16-, 24- or 32-channel processors (MSR 30-16 and 30-20 have 2 slots)

2 Enhanced Service Module slots, for advanced or standard encryption accelerators

1 Voice Co-Processor Module slot

2 copper Gigabit Ethernet ports (MSR 30-16 has 2 10/100 Ethernet)

2 USB 1.1 ports (MSR 30-16 has 1 USB 1.1)

1 CompactFlash slot

1 console port

1 auxiliary port

1 redundant power supply input (not available on 30-16 non-PoE model)

PROCESSORS

PowerPC 533 MHz

Voice Processing Module

8, 16, 24, or 32 voice channels

Enhanced Service Module

Standard or advanced encryption

Open Services Module (OSM)

Pentium M 1.4 GHz CPU

80 Gb hard drive

1 Gb DRAM

On-board Gigabit Ethernet interface

1 USB port

256 Mb CompactFlash

3Com | OS Operating System

SYSTEM MEMORY

4 Mb boot ROM

256 Mb (default) to 1 Gb DDR SDRAM

256 Mb Flash

POWER SUPPLY

AC Power

100 to 240 VAC, 50/60 Hz

210W maximum

POWER OVER ETHERNET

(PoE models only)

IEEE 802.3af PoE

MSR 30-16 and 30-20:

8 switched ports supported

MSR 30-40 and 30-60:

24 switched ports supported

PHYSICAL SPECIFICATIONS

MSR 30-16

Height: 44.2 mm (1.74 in)

Width: 442 mm (17.4 in)

Depth: 441.8 mm (17.39 in)

Weight:

PoE model— 6.6 kg (14.5 lb)

non- PoE model— 6.0 kg (13.2 lb)

MSR 30-20

Height: 44.2 mm (1.74 in)

Width: 442 mm (17.4 in)

Depth: 441.8 mm (17.39 in)

Weight:

PoE model— 7.1 kg (15.6 lb)

non- PoE model— 6.5 kg (14.3 lb)

MSR 30-40

Height: 88.2 mm (5.15 in)

Width: 442 mm (17.4 in)

Depth: 422.3 mm (16.63 in)

Weight:

PoE model— 8.6 kg (18.9 lb)

non- PoE model— 8.0 kg (17.6 lb)

MSR 30-60

Height: 132 mm (5.15 in)

Width: 442 mm (17.4 in)

Depth: 421.8 mm (16.61 in)

Weight:

PoE model— 10.6 kg (23.3 lb)

non- PoE model— 10.0 kg (22.0 lb)

ENVIRONMENTAL

Operating temperature:

0° to 40° C (32° to 104° F)

Storage temperature:

-40° to 70° C (-40° to 158° F)

Humidity (operating and storage):

5% to 90% non-condensing

REGULATORY COMPLIANCE

CE (European Union)

UL (North America)

FCC (North America)

EMC STANDARDS

FCC Part 15 (CFR 47) Class A

ICES-003 Class A

VCCI Class A

CISPR 22 Class A

EN 55022 Class A

AS/NZS CISPR22 CLASS A

EN 55024

CISPR 24

IEC 61000-3-2, 61000-3-3

EN 61000-6-1

ETSI EN 300 386 V1.3.3

SAFETY AGENCY CERTIFICATIONS

UL 60950-1: 2003

CAN/CSA C22.2 No 60950-1-03

IEC 60950-1 2001

EN 60950-1/A11: 2004

AS/NZS 60950

EN 60825-1 and 60825-2

FDA 21 CFR Subchapter J

TELECOM STANDARDS

FCC Part 68 (CFR 47)

IC CS-03

MTBF

MSR 30-16 PoE: 302,000 hours

MSR 30-16 non-PoE: 354,000 hours

MSR 30-20 PoE: 283,000 hours

MSR 30-20 non-PoE: 335,000 hours

MSR 30-40 PoE: 282,000 hours

MSR 30-40 non-PoE: 322,000 hours

MSR 30-60 PoE: 281,000 hours

MSR 30-60 non-PoE: 319,000 hours

Network Management

Tools

CLI

3Com Enterprise Management Suite

3Com Network Director

3Com Router Manager

Embedded Management Features

SNMP v1, v2c, v3

Standard and enterprise MIBs

Telnet

SSH

Syslog

BIMS

RMON

Zero-touch deployment

Configuration rollback

NetStream packet statistics

SPECIFICATIONS (CONTINUED)

LAN INTERFACE MODULES

LAN Modules (SIC/DSIC)

1-port 10/100 Ethernet
1-port 10/100/1000 Ethernet
4- and 9-port 10/100 Ethernet switching
4- and 9-port 10/100 PoE Ethernet switching

LAN Modules (MIM/DMIM)

2-, 16- and 24-port 10/100 Ethernet
1-port 10/100/1000 Ethernet
1-port Gigabit Ethernet fiber
16- and 24-port 10/100 PoE switching

WAN INTERFACE MODULES

WAN Modules (SIC/DSIC)

1-port enhanced serial sync/async
1- and 2-port ISDN-S/T
1- and 2-port ISDN-U
1-port E1/CE1/PRI
1-port T1/CT1/PRI
1-port ADSL 2+
1-port analog modem

WAN Modules (MIM)

1-port G.SHDSL
2- and 4-port enhanced serial sync/async
2- and 4-port E1/CE1/PRI
2-port FT1/CT1/PRI
4-port E1 IMA
4-port T1 IMA
4-port enhanced ISDN-S/T
1-port FE3/CE3
1-port FT3/CT3

VOICE MODULES

Voice Modules (SIC)

1- and 2-port voice FXS
1- and 2-port voice FXO
1-port E1 voice
1-port T1 voice

Voice Modules (MIM)

2- and 4-port voice FXS
2- and 4-port voice FXO
1- and 2-port E1 voice
1- and 2-port T1 voice
2- and 4-port E&M

VOICE SUPPORT

Interface

FXS
FXO
E&M
E1VI/T1VI

Signaling

SIP
R2
DSSSI
Q.sig
Digital E&M

H.323

H.225
H.245

CODECs

G.711A law
G.711U law
G.723R53
G.723R63
G.729a
G.729R8

Media Process

RTP/cRTP
IPHC
Voice backup

FAX

Fa

Other:

Voice RADIUS
Voice over Frame Relay (VoFR)

LINK PROTOCOLS

LAN Protocols

Ethernet II
Ethernet SNAP
IEEE 802.3x
VLAN
IEEE 802.1P
IEEE 802.1Q
IEEE 802.3ad LACP
IEEE 802.1w RSTP
IEEE 802.1s MSTP
IGMP snooping
GVRP

Port loopback

Port multicast suppression

WAN Protocols

PPP and Multilink PPP (MP)
PPPoE client and server
PPP/MP over FR
FR and Multilink FR (MFR)
Frame relay fragmentation, compression, and FR over IP
Frame Relay Traffic Shaping (FRTS)
ATM (IPoA, IPoEoA, PPPoA and PPPoEoA)
DCC and dialer watch
HDLC
LAPB
X25, X25 over TCP, X25 to TCP
X25 PAD, X25 hunt groups and X25 CUG
DLSW (V1.0/2.0)
ISDN and ISDN network
ISDN QSIG
MODEM

SPECIFICATIONS (CONTINUED)

NETWORK PROTOCOLS

IP Service and Applications

TCP
UDP
ARP
IP option
IP unnumbered
Policy-based routing (unicast/multicast)
PING, traceroute
DHCP server, relay, and client
DNS client
DNS static
NQA
IP accounting
UDP helper
NTP
Telnet
TFTP client
FTP server, client

IP Routing

Static
RIP v1 and v2
OSPF
OSPF v3
BGP IV
IS-IS
IGMP
PIM-DM
PIM-SM
MBGP
MSDP

Non-IP

SNA/DLSw
IPX
SOT
NetStream

QUALITY OF SERVICE (QOS)

Layer 2 QoS

SP
WRED (Port)
CAR
LR
Flow-based QoS policy
Port-based mirroring
Flow-based mirroring
CoS-based Head of Line Blocking (HOLB) prevention
Packet remarking
Flow redirect
Flow accounting
Priority mapping
Port trust mode
Port priority
Flow filter
Flow control and backpressure
ACL

Traffic Policing

Committed Access Rate (CAR)
Line Rate (LR)

Congestion Management

FIFO
PQ
CQ
WFQ
CBQ
RTPQ

Congestion Avoidance

WRED/RED

Traffic Shaping

Generic

Other

FR QOS
MPLS QOS
MP QoS/LFI
cRTP/IPHC
ATM QOS
Sub-interface QoS

NETWORK SECURITY AND RELIABILITY

Port-Based

PPPoE client and server
Portal
IEEE 802.1X

AAA

Local authentication
RADIUS
TACACS

Firewall

ASPF
Access Control Lists (ACL)
Filtering

Data Security

IKE
IPSec
Encryption accelerator
Portal

Other

L2TP
NAT/NAPT
PKI
RSA
SSH v1.5 and v2
SSL
URPF
GRE

Reliability

VRRP
Backup Center

WARRANTY AND OTHER SERVICES

One-year Limited Hardware Warranty
Limited Software Warranty for 90 days
90 days of telephone technical support
Refer to www.3com.com/warranty for details.

ORDERING INFORMATION

PRODUCT DESCRIPTION

3Com MSR 30-16 Multi-Service Router	0235A327
3Com MSR 30-16 PoE Multi-Service Router	0235A321
3Com MSR 30-20 Multi-Service Router	0235A328
3Com MSR 30-20 PoE Multi-Service Router	0235A322
3Com MSR 30-40 Multi-Service Router	0235A299
3Com MSR 30-40 PoE Multi-Service Router	0235A323
3Com MSR 30-60 Multi-Service Router	0235A320
3Com MSR 30-60 PoE Multi-Service Router	0235A296

Voice Processors

3Com Multi-Service Router 32-Channel Voice Processor Module	0231A63L
3Com Multi-Service Router 24-Channel Voice Processor Module	0231A63M
3Com Multi-Service Router 16-Channel Voice Processor Module	0231A63N
3Com Multi-Service Router 8-Channel Voice Processor Module	0231A63P
3Com Multi-Service Router Voice Co-Processor Module	0231A64S

LAN Smart Interface Card (SIC) Modules

3Com Router 1-Port 10/100 SIC	0231A53T
3Com Router 1-Port 10/100/1000 SIC	0231A61M
3Com Router 4-Port 10/100 SIC	0231A61N
3Com Router 9-Port 10/100 DSIC	0231A61P
3Com Router 4-Port 10/100 POE SIC	0231A769
3Com Router 9-Port 10/100 POE DSIC	0231A770

LAN Multi-function Interface Modules (MIM)

3Com Router 1-Port 10/100/1000 MIM	0231A55R
3Com Router 1-Port GbE Fiber MIM	0231A55U
3Com Router 24-Port 10/100 DMIM	0231A60S
3Com Router 16-Port 10/100 MIM	0231A60X
3Com Router 2-Port 10/100 MIM	0231A71A
3Com Router 16-Port 10/100 POE MIM	0231A75R
3Com Router 24-Port 10/100 POE DMIM	0231A75S

WAN Smart Interface Card (SIC) Modules

3Com Router 1-Port Analog Modem SIC	0231A49M
3Com Router 1-Port ADSL2+ SIC	0231A50Y
3Com Router 1-Port Fractional T1 SIC	0231A52S
3Com Router 1-Port Fractional E1 SIC	0231A53X
3Com Router 1-Port Enhanced Serial SIC	0231A56N
3Com Router 2-Port FXO SIC	0231A56P
3Com Router 1-Port FXO SIC	0231A56Q
3Com Router 2-Port FXS SIC	0231A56R
3Com Router 1-Port FXS SIC	0231A56S
3Com Router 1-Port ISDN-U SIC	0231A61A
3Com Router 1-Port ISDN-S/T SIC	0231A61H
3Com Router 1-Port E1 Voice SIC	0231A61Q
3Com Router 1-Port T1 Voice SIC	0231A61R

PRODUCT DESCRIPTION

WAN Multi-function Interface Modules (MIM)

3Com Router 4-Port E&M MIM	0231A52V
3Com Router 2-Port Enhanced Serial MIM	0231A53D
3Com Router 4-Port Enhanced Serial MIM	0231A53E
3Com Router 4-Port FXO MIM	0231A53F
3Com Router 2-Port FXO MIM	0231A53G
3Com Router 1-Port FT3/CT3 MIM	0231A53L
3Com Router 1-Port FE3/CE3 MIM	0231A53M
3Com Router 2-Port CE1/PRI MIM	0231A53P
3Com Router 1-Port G.SHDSL MIM	0231A54D
3Com Router 2-Port FT1/CT1/PRI MIM	0231A54P
3Com Router 4-Port CE1/PRI MIM	0231A54R
3Com Router 2-Port E&M MIM	0231A55A
3Com Router 4-Port FXS MIM	0231A55S
3Com Router 2-Port FXS MIM	0231A55T
3Com Router 4-Port E1 IMA MIM	0231A56D
3Com Router 4-Port T1 IMA MIM	0231A56F
3Com Router 4-Port ISDN-S/T MIM	0231A56U
3Com Router 1-Port E1 Voice MIM	0231A60T
3Com Router 1-Port T1 Voice MIM	0231A60U
3Com Router 2-Port E1 Voice MIM	0231A60V
3Com Router 2-Port T1 Voice MIM	0231A60W

Open Services Networking Multi-function Interface Modules (MIM)

3Com Router Open Services Networking MIM	0231A704
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Encryption Options

3Com Multi-Service Router Advanced Encryption Accelerator	0231A64Q
3Com Multi-Service Router Standard Encryption Accelerator	0231A64R
3Com Router NDEC2 Encryption Accelerator MIM	0231A55Y

Cables

3Com Router Auxiliary Cable	3C13670
3Com Router T1 Cable	3C13674
3Com Router E1 BNC Cable - 20m	3C13675
3Com Router E1 RJ45 Cable - 20m	3C13676
3Com Router E1 RJ45 Cable - 3m	3C13677
3Com Router X.21 DTE Cable - Enhanced	3C13681
3Com Router X.21 DCE Cable - Enhanced	3C13682
3Com Router V.24 DTE Cable - Enhanced	3C13683
3Com Router V.24 DCE Cable - Enhanced	3C13684
3Com Router V.35 DTE Cable - Enhanced	3C13685
3Com Router V.35 DCE Cable - Enhanced	3C13686
3Com Router T3/E3 Cable	3C13687
3Com Router T1 Voice Cable	3C13688
3Com Router 4-Port E1 IMA Cable	0404A042
3Com Router 4-Port T1 IMA Cable	0404A045
3Com Router 8-Port E1 Cable	0404A00R

Visit www.3com.com for more information about 3Com secure converged network solutions.

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